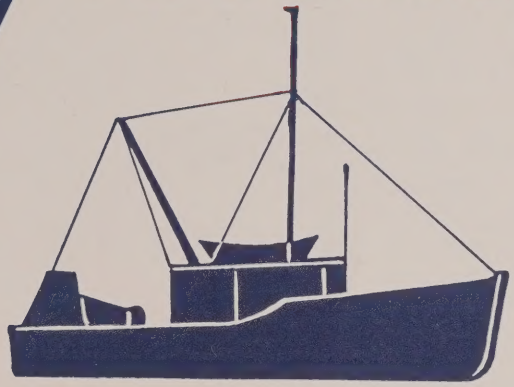
SAFETY HANDBOOK



FOR THE INSHORE FISHERMAN

Canadian Coast Guard | Garde côtière canadienne

Canada

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Contents

Cette publication est aussi disponible en français TP5859F

What you need on your fishing vessel

Information in this guide applies primarily to commercial fishing vessels not exceeding 15 tons gross tonnage that are not subject to regulatory inspections by the Ship Safety Branch, Canadian Coast Guard. The Manual of Safety and Health for Fishermen (TP 1283) is available, from the Coast Guard, for those fishing vessels that are subject to regulatory inspections.

This guide details the equipment required under the Small Fishing Vessel Inspection Regulations and the International Regulations for the Prevention of Collision at Sea ('Collision Regulations').

In general, your vessel must carry one approved standard lifejacket for each person on board.

Depending on vessel equipment, one fire extinguisher or more must be carried.

Navigation lights, horn and bell must comply with the Collision Regulations.

All standard lifejackets, lifebuoys and pyrotechnic distress signals (distress flares) must be of a type approved by Transport Canada.

The Coast Guard will, on request, conduct a Courtesy Examination of safety equipment on your vessel. This examination is free of charge. PLEASE CONTACT THE NEAREST COAST GUARD OFFICE.

Fishing vessels up to 12.2 m in length and not exceeding 15 tons gross tonnage
(Minimum required equipment)

- One approved standard lifejacket for each person on board
- One approved lifebuoy, 762 mm in diameter, with 27 m of line
- Six approved distress flares of types A, B or C in a water-tight container
- One Class* B-I fire extinguisher
- One additional Class* B-I fire extinguisher if vessel has a cooking or heating appliance that burns liquid or gaseous fuel
- One fire bucket if vessel exceeds 5 tons gross tonnage
- Lights must comply with Collision Regulations
- Sound devices must comply with Collision Regulations
- Radar reflector must comply with Collision Regulations

*See on page 5 equivalent fire extinguisher table

Fishing vessels exceeding 12.2 m in length and not exceeding 15 tons gross tonnage
(Minimum equipment required)

- One approved standard lifejacket for each person on board
- One approved lifebuoy 762 mm in diameter with 27 m of line
- Six approved distress flares of Types A, B or C in a water-tight container
- One Class*B-I fire extinguisher
- One additional Class*B-I fire extinguisher if vessel has a cooking or heating appliance that burns liquid or gaseous fuel
- One fire bucket
- Lights must comply with Collision Regulations
- Sound signals must comply with Collision Regulations
- Radar reflector must comply with Collision Regulations
- Sufficient liferafts, boats, skiffs or dories to accommodate all persons on board.

*See on page 5 equivalent fire extinguisher table

Safety practices

Fire extinguishers

Fire extinguishers must be of a type approved by:

- Board of Steamship Inspection (Transport Canada Coast Guard)
- Underwriters Laboratories of Canada
- British Board of Trade for Marine Use
- United States Coast Guard for Marine Use

Regulations governing fire extinguishers refer to designators, such as AI, AII, BI, BII, that may not appear on the label. The following equivalency table shows the extinguisher(s) required for your vessel.

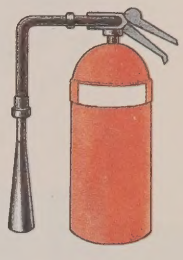
- The letters A, B or C, which appear on the label, represent the class of fire for which the extinguisher is designed:
  - A — Combustible Solid (Wood, Paper, etc.)
  - B — Combustible Liquid (Gas, Oil, etc.)
  - C — Electrical

Equivalent fire extinguishers

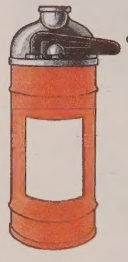
	Soda Acid and Water	Foam	Carbon Dioxide Gas	Dry Chemical	Halon 1211 Portable
Class	L	L	kg	kg	kg
AI	4.5	4.5			
AII	9	9			
BI		4.5	2.25	0.9	1.36 or 3.175
BII		9	4.5	2.25	

Types of fire extinguishers

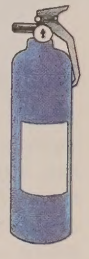
- Dry chemical extinguishers tend to 'cake,' so shake them periodically. Store them where constant engine vibration is least.



- CO_2 extinguishers should be weighed annually and recharged if they contain less than 90% of rated capacity.



- Extinguishers discharging foam or water should be emptied and recharged annually. Never use them against electrical fires.



- The 1211 Halon type contains colourless, odourless gas: should be inspected regularly: is not to be stored in accommodation space.

Note:

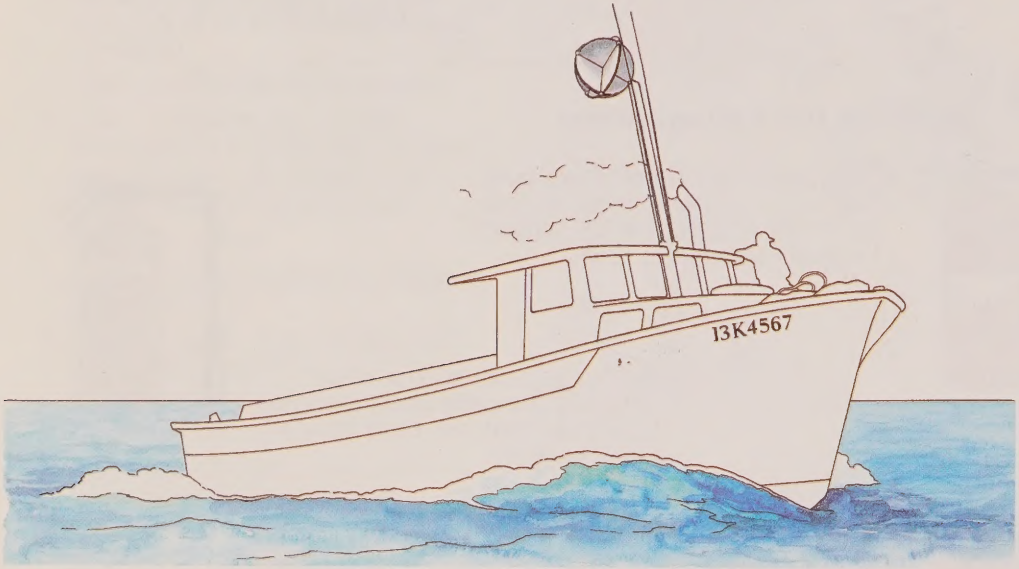
Be familiar with their operation and place them where they are readily available for use.

Radar

Radar should be operating and a radar watch kept when visibility is poor.

It is hazardous to work near radio antennae or radar scanners due to danger from both radiation and the rotation of scanners. Ensure radar is off and crew are aware when someone is working aloft.

On the radar panel in the cabin, place a sign "man working aloft, do not operate radar."

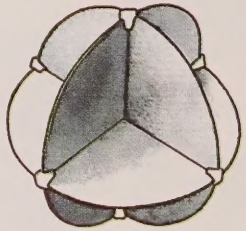


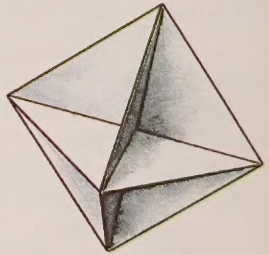
Radar reflector

Required for vessels under 20 m in length and all non-metal vessels.

Locate reflectors above all superstructure, at least 4 m above the water (if possible).

Properly positioned, its reflection will provide the range and probability of detection (contact) on radar screen.

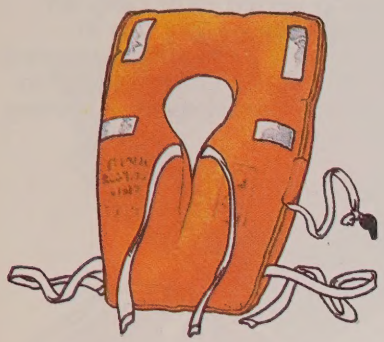




Licensing and markings

A licence is required for all fishing vessels used in Canada which do not exceed 15 tonnes gross tonnage, have one or more engines and total power of 7.5 kW or more. An application form can be obtained from Revenue Canada, Customs and Excise. Licences are issued free of charge. The licence number must be in capital letters at least 7.5 cm high in a colour that contrasts with the hull.

Abandon ship



This approved standard lifejacket, which is mandatory on all fishing vessels, is available in one style (keyhole) and two sizes — weight over 41 kg and under 41 kg. To ensure buoyancy, damage or puncturing of vinyl inserts must be avoided.

- Tie neck tapes first, then tie waist tapes around your waist, never the jacket. Never put clothing over the lifejacket.
- Try it out, don't wait for an emergency.
- Before entering the water — secure jacket properly — always hold down neck piece with both hands — enter water feet first.
- Personal Flotation Devices (PFDs) do not replace approved standard lifejackets on fishing vessels. They are intended for constant wear when working on deck or in small open boats.

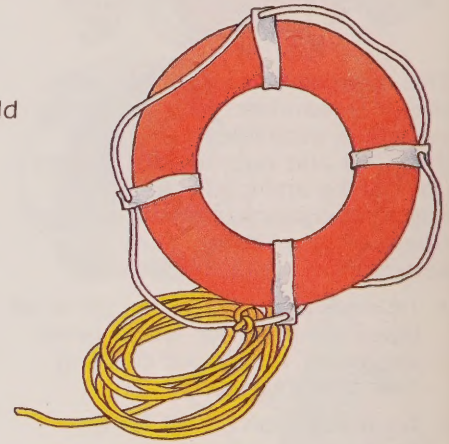
Immersion suits (optional equipment)

Many types of immersion suits are available, so be sure yours is Transport Canada approved. TRY IT OUT SOMETIME; DON'T WAIT FOR AN EMERGENCY.

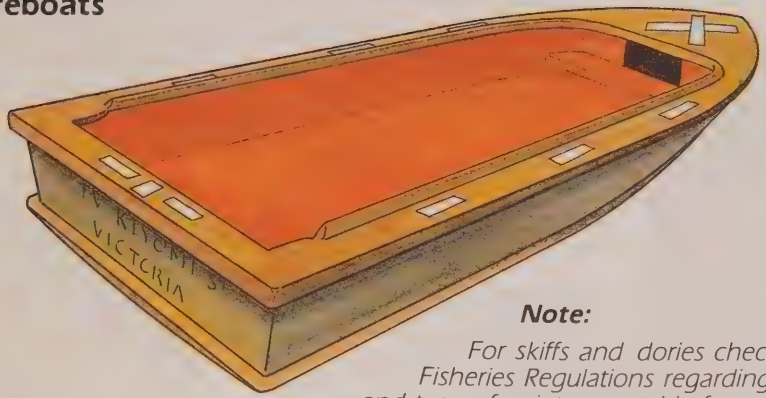
- Remove suit from bag/container and pull it on as you would coveralls.
- Pull hood over head, close zipper with slow, even pull, then close face cover
- Inflate lifering (if applicable) after entering water.
- When entering the water — always cross your arms and hold onto your shoulders — ensure face cover is closed — enter water feet first.

Lifebuoys

All fishing vessels must carry an approved lifebuoy 762 mm in diameter with 27 m of line attached. Affix identification of the vessel to the lifebuoy (vessel name — fishing licence number).



Lifeboats



Note:

For skiffs and dories check with local Fisheries Regulations regarding painting and type of paint acceptable for fish-holding areas.

Lifeboats, or liferafts should not be used for any purpose other than that intended. Boats should be tested regularly in the water. Their interior and exterior bottoms and sides should be painted orange or yellow with reflective tape applied for easier visual detection.

Landing

Landing a lifeboat through surf is hazardous. Approach the shore stern first with the bow head-on to the sea to avoid swamping, broaching and capsizing. Use a sea anchor. Once beached, pull the boat above the high-water mark and prepare for survival and rescue.

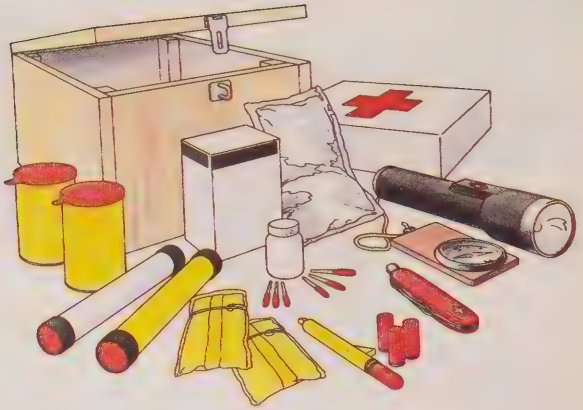
Inflatable liferafts

These self-contained survival craft, with emergency packs, are stored in fibreglass or canvas containers.

- Position containers so that they are easily accessible for launching in all weather conditions.
- Secure rafts in their cradles and secure the painter to a strong point on the vessel.
- Shipping straps must be removed to ensure proper inflation.
- Some rafts are set in deep chocks that allow the raft to float free during a sinking.
- Hydrostatic release apparatus will allow the automatic release of the raft during a sinking. Ensure the diaphragm of the release mechanism is clean.
- Fishermen should be familiar with correct launching and operating procedures.
- In the raft, wear an exposure suit or carry extra clothing and blankets to avoid hypothermia.
- Deploy a sea anchor to reduce drift.
- Inflatable liferafts must be inspected annually.

Survival

- A watertight emergency equipment box fitted into chocks and mounted on top of the vessel is readily accessible and would float free during a sinking.
- If there is danger from sharks or other dangerous fish:
  - embark on any flotsam and do not let anything trail in the sea — do not remove clothing



- keep as quiet and stationary as possible. If it is necessary to swim, use rhythmic strokes, never thrash about.
- do not trail arms, legs or bright objects and do not jettison garbage or foul matter.

Calling for help — distress signals

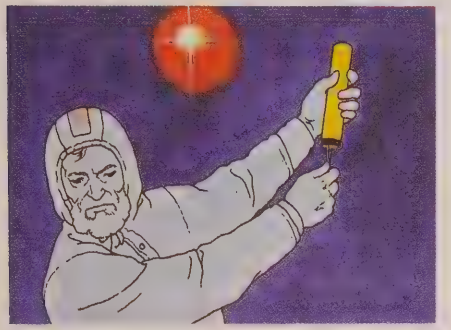
There are a number of types of approved pyrotechnics (flares). Commercial fishing vessels not exceeding 15 tons gross tonnage are required to carry at least six flares of types A, B or C.

Note: Flares are valid only four years from date of manufacture. To dispose of outdated flares, seek advice from the nearest Coast Guard unit or police agency.

Storage

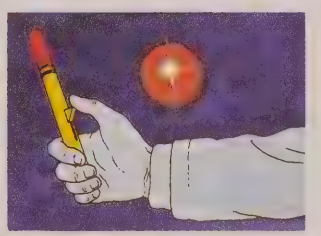
1. Store them in a watertight container.
2. They must be stored in a cool, easily accessible place.

Type A — Parachute



- Easily observed from surface or air, this flare may have a two- to three-second delay after the fire pin is pulled, and burns at least 40 seconds.

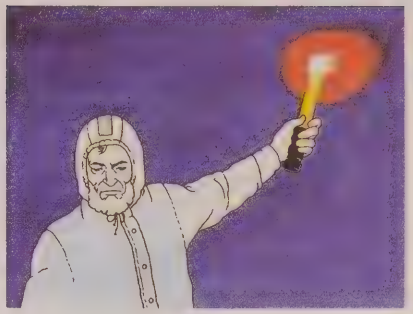
Type B — Multi star



- Readily observed from surface or air, this flare burns four to five seconds.

Note: *When using a single star shell, carry two shells for every Type B.*

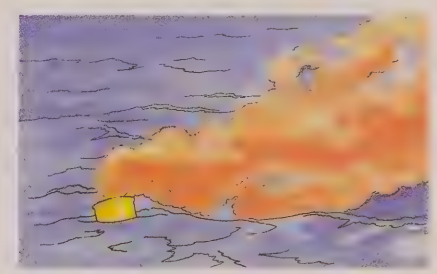
Type C — Hand held



- This flare has limited surface visibility, is best observed during an air search.

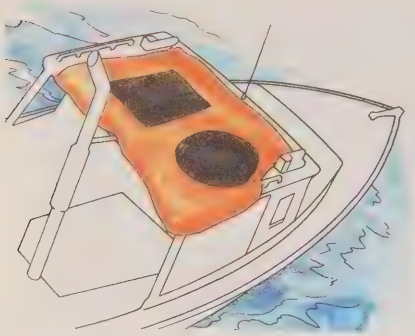
Note: *Avoid looking directly at flare while it is burning: hold it well clear of the boat.*

Type D — Buoyant or hand held

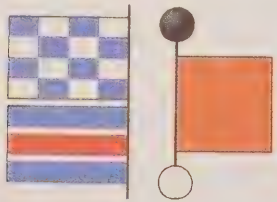


- This smoke flare is used as a day distress signal only: it burns for three minutes. It may not form part of the mandatory equipment required for small fishing vessels.

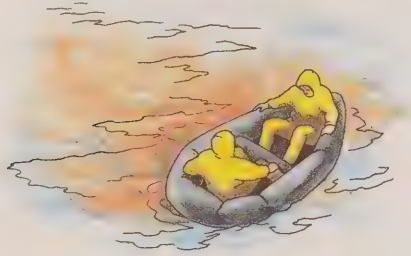
Other distress signals



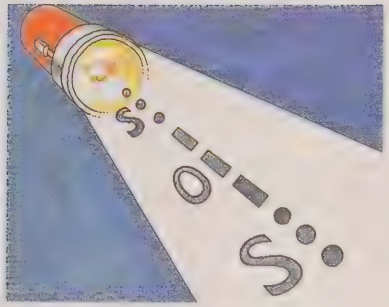
- To attract attention: Spread on cabin top or deck, or fly from mast



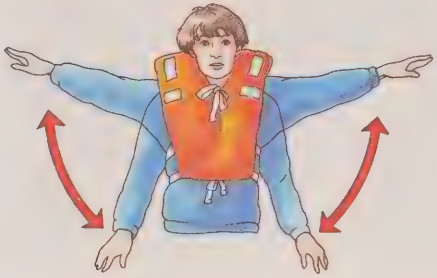
- International code flag "N" over "C." Any type of ball shape over or under any square flag or cloth.



- Dye Marker



- Use sound signals or spotlight to signal SOS repeatedly.



- Arm signal: Raise and lower outstretched arms repeatedly.

Emergency position indicating radiobeacon (EPIRB)

The Coast Guard is planning to put into effect Emergency Position Indicating Beacon (EPIRB) Regulations in 1989. After that date, all fishing vessels 12 m or more in length will have to be equipped with an EPIRB, using the 406 MHz frequency.

There are two classes of EPIRBs:

– Class 1 is designed to float free and is activated automatically; and

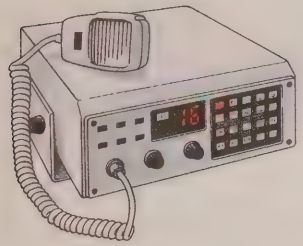
– Class 2 is a portable floating model and is activated manually.

In the EPIRB carton you will find a card that should be completed and returned to the Coast Guard. The information contained on the card will provide rescue centres with a basic description of the vessel in distress. In the event of a resale or change of vessel, a new card will have to be sent to the Coast Guard so that the information can be updated.

Lastly, for those whose vessels are equipped with an EPIRB using the frequency of 121.5 MHz or 243 MHz, the regulations will allow you a period of time (probably four years) to comply with the law.

LUT	Local User Terminal
MCC	Mission Control Centre
RCC	Rescue Coordination Centre

Marine radio



2182 kHz;

— HF Channel 51

156.8 MHz

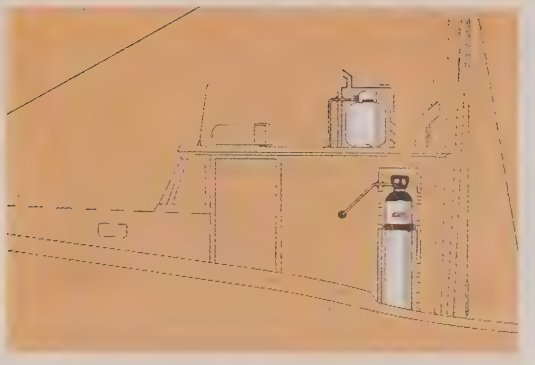
— VHF Channel 16

CB: Channel 9 (Coast Guard does not monitor CB radio)

In a distress situation: Repeat 'MAYDAY' three times, then name of vessel, position, nature of distress and assistance requested.

When no imminent danger to life or property exists: repeat 'PANPAN' three times, then name of vessel, position, nature of emergency and assistance required, if any.

Continue to broadcast message until answer received.

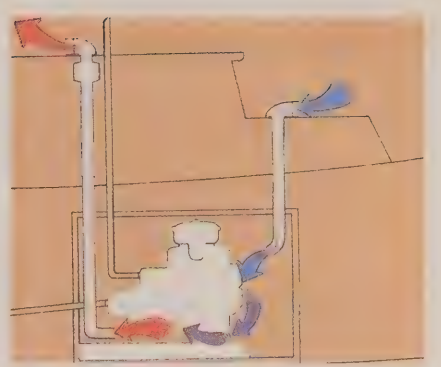


Propane can be hazardous

Propane and butane can pose greater risks than gasoline. Heavier than air, they flow rapidly into lower parts of the vessel and are extremely difficult to remove.

Gas-burning appliances and gas cylinders must be properly secured, protected and ventilated to ensure that any gas escaping cannot reach the bilges or any other enclosed space. Complete information is contained in the Liquefied Petroleum Gas Regulations which can be obtained from Canadian Government Publishing Centre, Ottawa, Ont. K1A 0S9.

Also, for more information contact Canadian Gas Association, 55 Scarsdale, Don Mills, Ontario M3B 2R3.



Safe ventilating

Many explosions and fires in fishing vessels have resulted from inadequate or total lack of proper ventilation and backfire control.

- For proper ventilation, you need at least one duct for exhaust and one duct for supply
- Exhaust ducts lead from bilges, under the engine or fuel tanks, to the surface
- Supply ducts lead from the surface to a level below carburetor intake
- Ducts should be as far apart as possible for good air circulation
- Ducts may be fitted with wind-activated, self-trimming or rotary heads, in addition to power-operated exhaust fans.
- Turn on the fan at least five minutes before starting the engine.

Refueling precautions

1 — Moor the vessel securely

2 — Shut off engines: all persons not involved with fueling should vacate the vessel

3 — No smoking — extinguish all open flames (stoves, heaters, fuel-operated refrigerators and all naked lights)

4 — Close all hatches, doors and ports — take portable tanks ashore

5 — Ground nozzle against filler pipe — do not overfill

6 — Wipe up any spillage — turn on blower for at least five minutes — ventilate cabins and enclosed spaces

7 — Check for vapour odours with 'sniffer device' and by sniffing

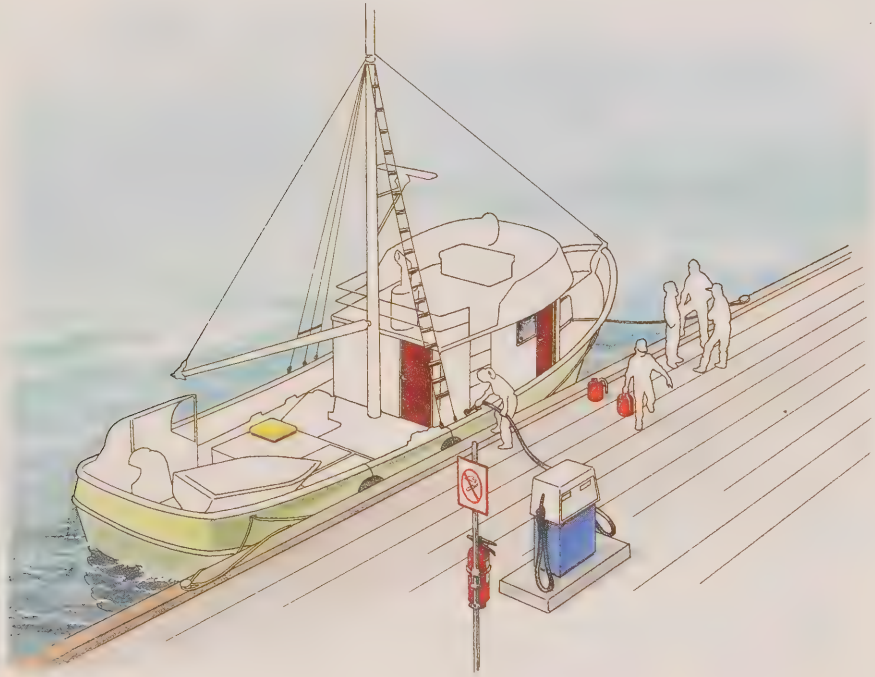
8 — Start engines — allow crew to reboard.

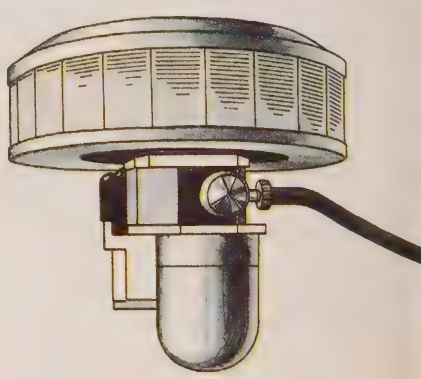
Note:

Partly filled tanks can be dangerous; the number of slack tanks should be minimized.

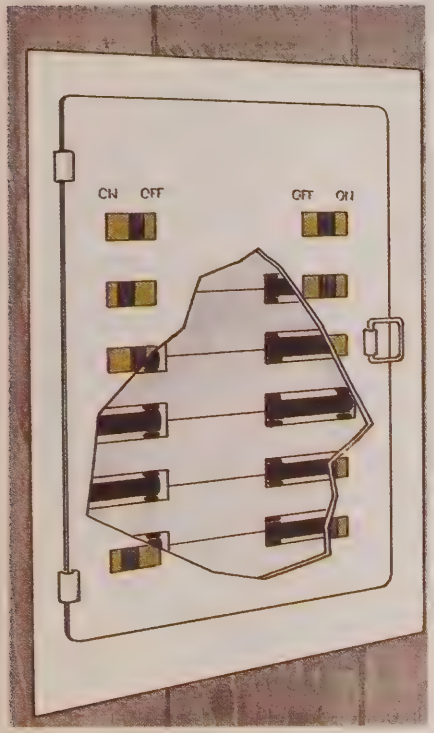
Flame arrestors reduce the probability of dangerous backfires. Clean them often with soap and water.

Drip pans must be fitted under the carburetor of inboard gasoline engines. They collect dripping fuel that otherwise would drop to the bilge, creating an explosive situation. Keep them clean.



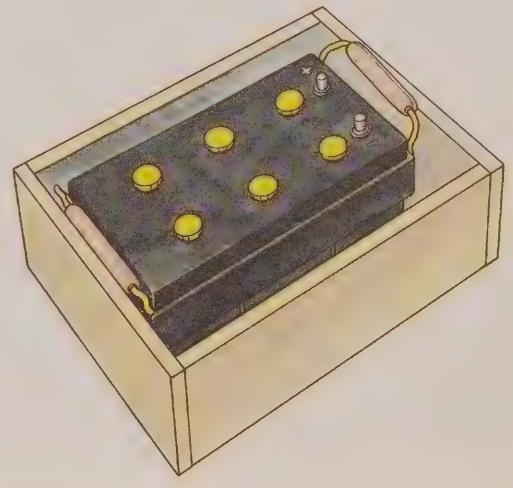


Electrical installations



To minimize hazards, all electrical equipment and circuits must be properly maintained.

- Assume all circuits are live until you are certain that they are not
- Stand on a non-conducting mat when working on electrical equipment, and ground all non-conducting parts
- Never bridge fuses, and use only the correct amperage rating
- Immediately investigate and repair/disconnect any motors, generators, cables, etc. that are excessively hot.
- When work is being done on electrical equipment, ensure crew is advised and power is off.
- Batteries are to be well secured and maintained
- Battery storage areas are to be well ventilated and easily accessible
- Never locate batteries in accommodation spaces or under an alternator.
- Batteries being charged generate hydrogen gas, so smoking and open flames must be prohibited.
- The box shall be constructed or lined with materials resistant to corrosion.
- Ensure that all filling caps are in place and that the battery is not cracked.



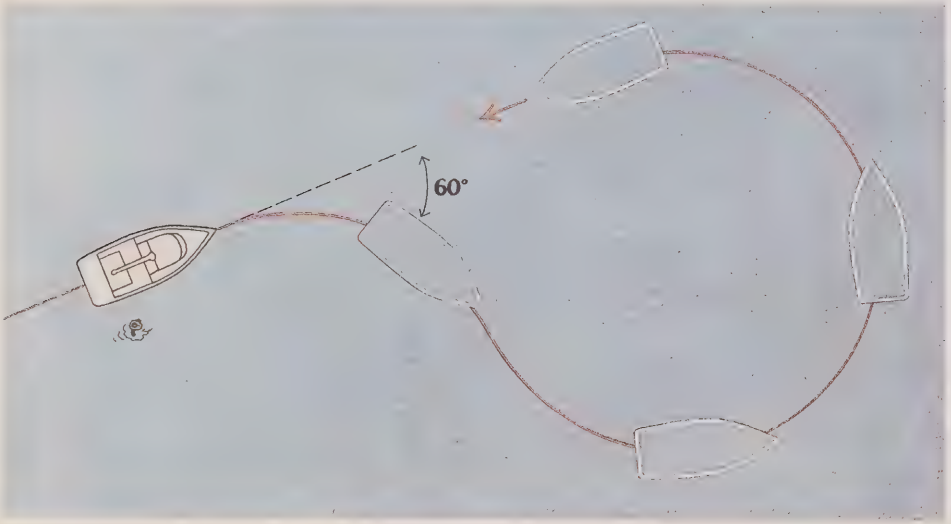
Falling overboard

Immediately when someone falls overboard:

- Sound alarm — stop engines — throw a buoyant object to assist the person and to mark the spot
- one person should be detailed to do nothing else but keep sight of the person in the water
- carefully manoeuvre to effect recovery
- be careful in retrieval as many would-be rescuers have been pulled into the water by the person in distress.

In reduced visibility or if it is not possible to keep the person in sight — use the Williamson Turn:

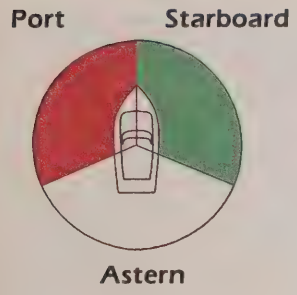
- immediately put the rudder hard over to the side from which the person fell. Maintain engine speed until approximately 60° from original heading, then ease the rudder and put hard over to the opposite direction to bring the vessel around to the reciprocal of the original course. Stop engines and the vessel should drift down to the person's position dead ahead.



Note:

The effectiveness of this manoeuvre will vary with each vessel and with weather/sea conditions. Practice it — it may save a life.

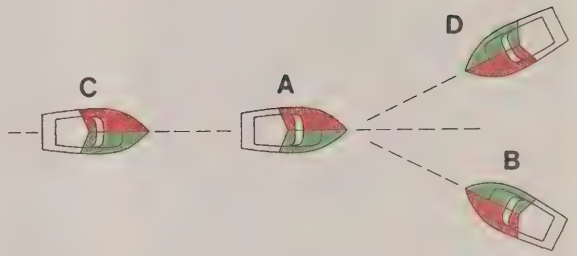
Operating regulations



Port: If a power-driven vessel approaches within this sector, maintain your course and speed with caution.

Starboard: If any vessel approaches within this sector, keep out of its way.
(*Note:* This rule may not always apply if one or both vessels are sailboats.)

Astern: If any vessel approaches this sector, maintain your course and speed with caution.

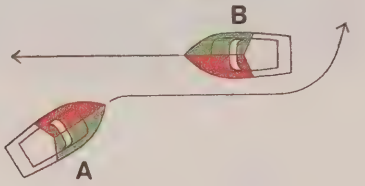


A keeps clear of B
B keeps clear of D

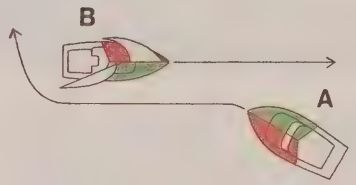
C keeps clear of A and B
D keeps clear of A and C

A blows one blast and alters course to starboard.

B blows one blast and alters course to starboard.



A keeps clear of and must avoid crossing ahead of B.

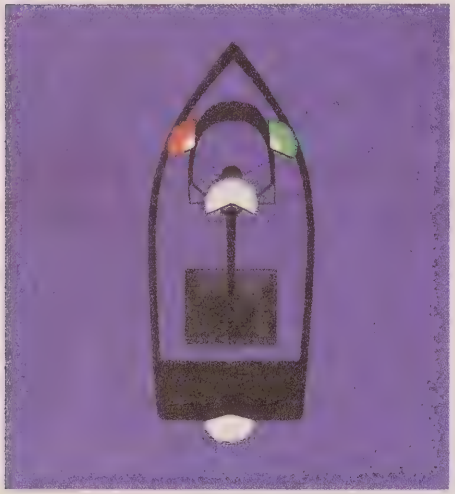


A power-driven vessel keeps clear of a sailing vessel.

Any vessel overtaking another must keep clear.

Navigation lights (collision regulations)

Power-driven vessels less than 50 m long, when under way:



Note

Vessels under 12 m such as power skiffs, etc exhibit an all round white light and side lights, in lieu of the lights described above.

Vessel of less than 50 metres long when anchored:

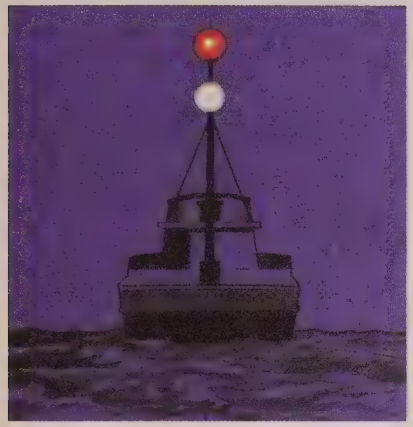
Day Signal

A vessel less than 7 metres, when at anchor, not in or near a narrow channel, fairway or anchorage, or where other vessels normally navigate, shall not be required to exhibit the lights or shape prescribed.

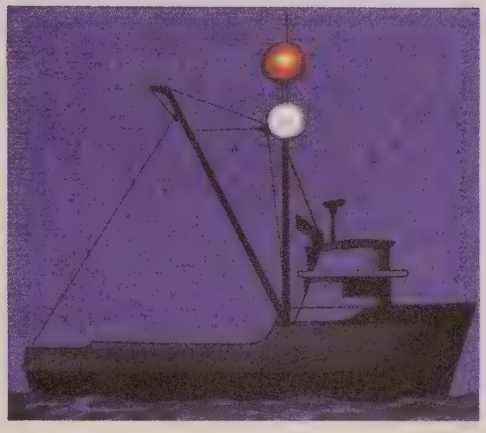
A vessel engaged in fishing other than trawling shall exhibit:

- two all-round lights in a vertical line, the upper being red and the lower white. By day a shape consisting of two cones with their apexes together in a vertical line one above the other; a vessel of less than 20 metres in length may instead of this shape exhibit a basket;
- when there is outlying gear extending more than 150 metres horizontally from the vessel, an all-round white light or, by day a cone apex upwards in the direction of the gear;
- when making way through the water, in addition to the lights prescribed in this paragraph, sidelights and a sternlight.

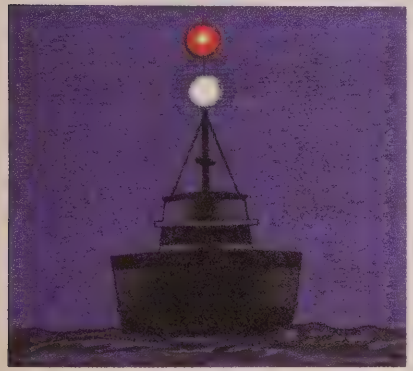
A fishing vessel engaged in fishing other than trawling and not making way through the water and no outlying gear extending more than 150 metres:



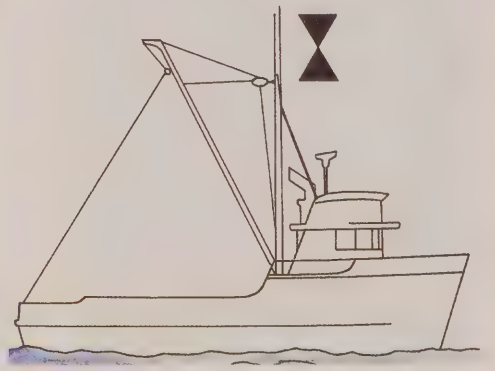
Stern view



Starboard view

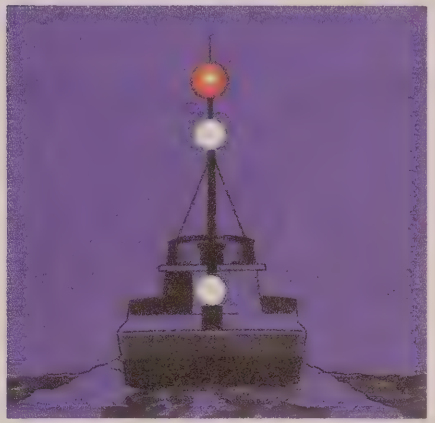


Bow view

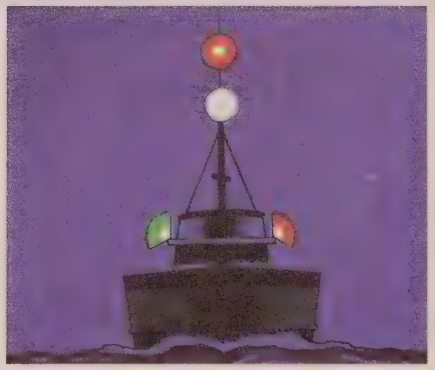


Day signal

A fishing vessel engaged in fishing other than trawling, making way through the water and no outlying gear extending more than 150 metres:



Stern view

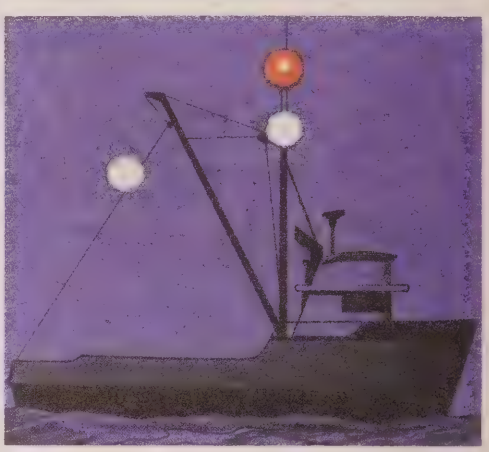


Bow view

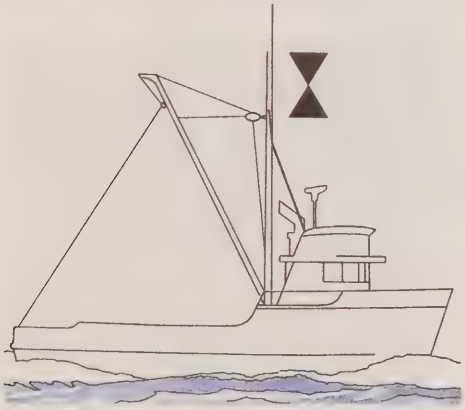
A fishing vessel engaged in fishing other than trawling, with nets extending more than 150 metres from the vessel and vessel not making way through the water:

Starboard view

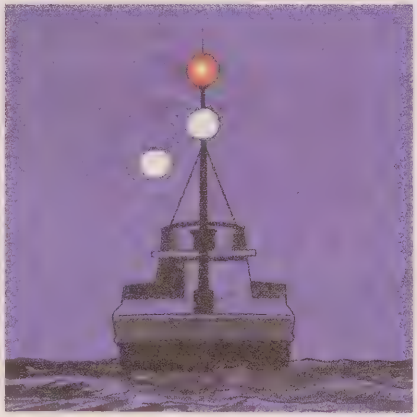
Bow view



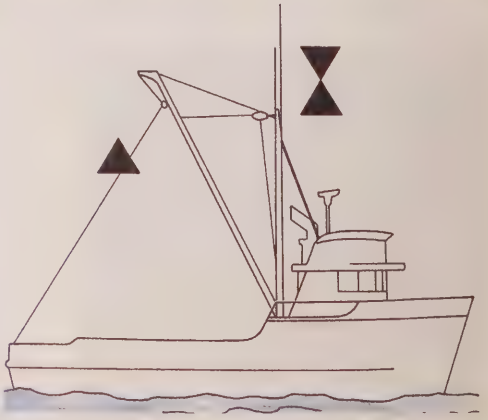
Starboard view



Day signal

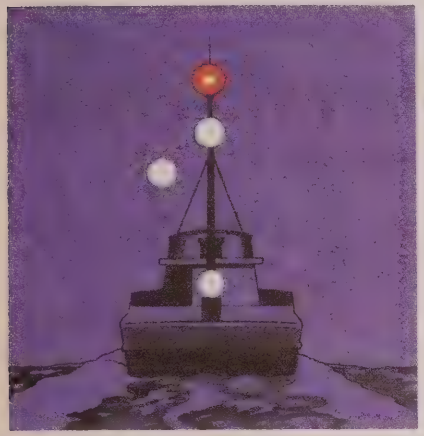


Stern view

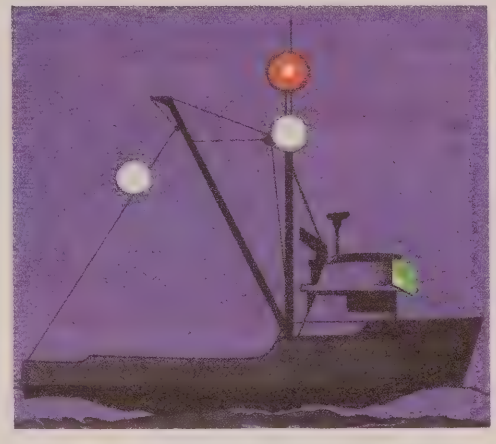


Day signal

A fishing vessel engaged in net fishing with nets extending more than 150 metres from the vessel and making way through the water:

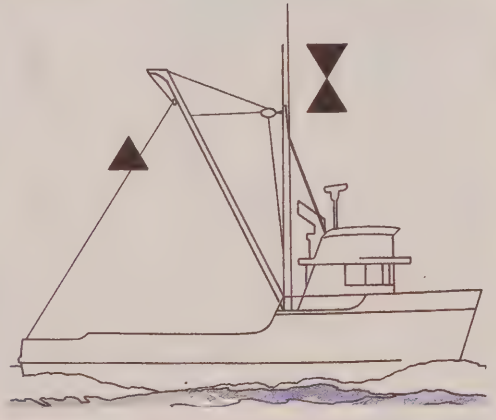


Stern view



Starboard view

Bow view

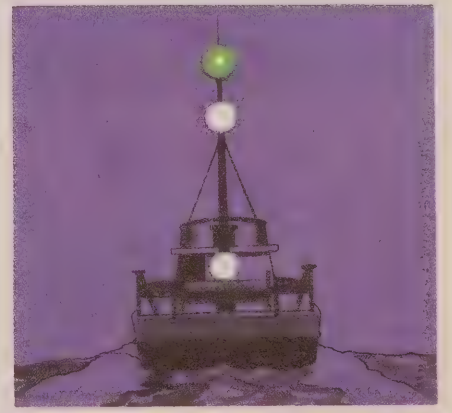


Day signal

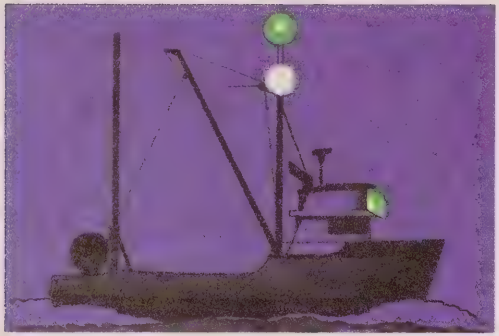
A vessel engaged in TRAWLING shall exhibit:

- two all-round lights in a vertical line, the upper being green and the lower white. By day a shape consisting of two cones with their apexes together in a vertical line one above the other; a vessel of less than 20 metres in length may instead of this shape exhibit a basket;
- when making way through the water, in addition to the lights prescribed in this paragraph, sidelights and a sternlight.

Trawling Vessel less than 50 metres engaged in fishing and making way through the water:

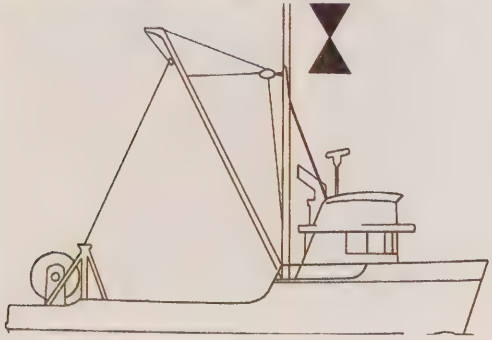


Stern view



Starboard view

Bow view

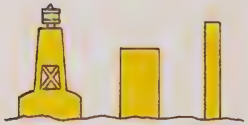


Day signal

The Canadian buoyage system

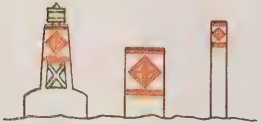
Special purpose buoys

Anchorage — Used to mark the perimeter of designated anchorage areas; before anchoring in an area marked by these buoys, consult your chart for water depths.



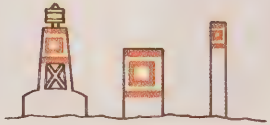
Cautionary — Used to mark dangers such as military exercise areas, underwater pipelines, race courses, seaplane bases and areas where no through channel exists; consult your chart for details of danger being marked.

Mooring — Used for mooring or securing vessels; be aware that a vessel may be secured to such a buoy.



Keep Out — Used to mark areas in which boats are prohibited; do *not* enter areas marked with these buoys.

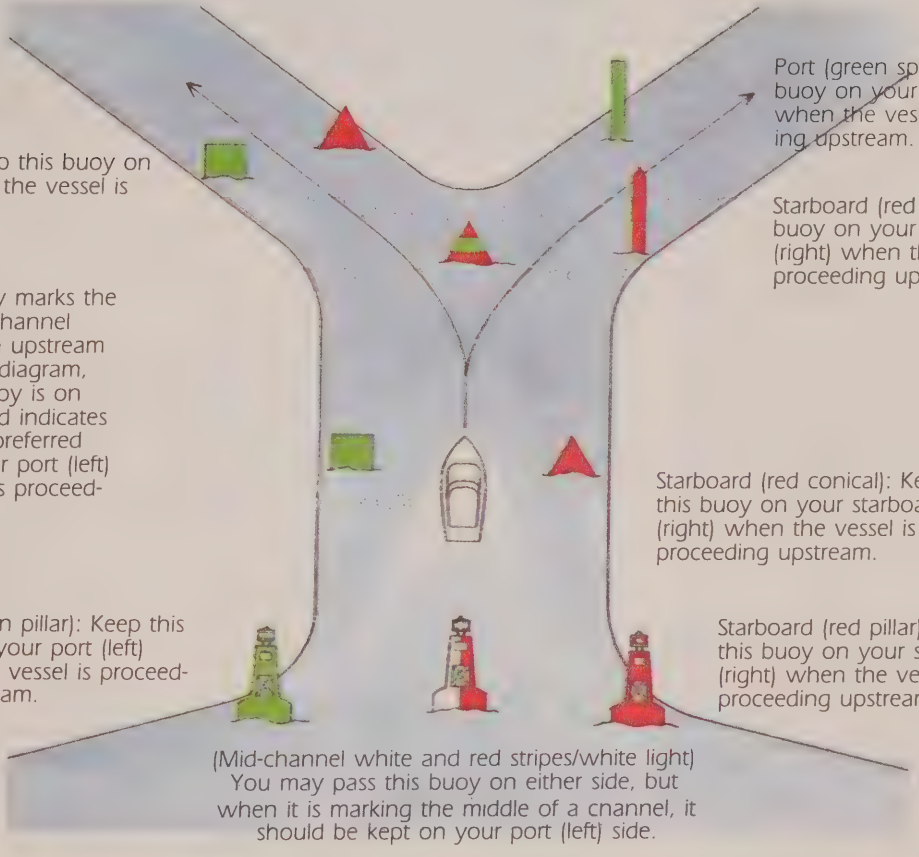
Control — Used to indicate speed limits, wash restrictions, etc.; obey the restriction illustrated within the orange circle.



Information — Used to display information such as locality, name, marina, campsite, etc.; be guided by information illustrated within the orange square.

Details of the system are available free of charge from all Coast Guard offices, chart distributors (see back of booklet), or from Transport Canada Public Affairs, Ottawa, Ontario K1A 0N5.

Lateral buoys



Port (green can): Keep this buoy on your port (left) when the vessel is proceeding upstream.

Port (green spar): Keep this buoy on your port (left) when the vessel is proceeding upstream.

Starboard (red spar): Keep this buoy on your starboard (right) when the vessel is proceeding upstream.

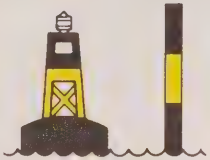
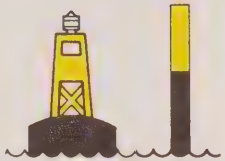
A bifurcation buoy marks the point where the channel branches off in an upstream direction. On the diagram, the bifurcation buoy is on your starboard and indicates that the main or preferred channel is on your port (left) when the vessel is proceeding upstream.

Starboard (red conical): Keep this buoy on your starboard (right) when the vessel is proceeding upstream.

Port (green pillar): Keep this buoy on your port (left) when the vessel is proceeding upstream.

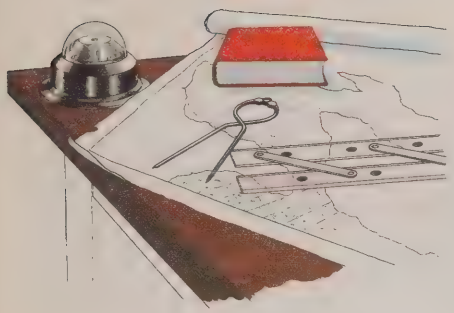
Starboard (red pillar): Keep this buoy on your starboard (right) when the vessel is proceeding upstream.

(Mid-channel white and red stripes/white light) You may pass this buoy on either side, but when it is marking the middle of a channel, it should be kept on your port (left) side.

CARDINAL BUOYS	BUOY SHAPE AND COLOUR	TOPMARK A	LIGHT COLOUR	BUOY PLACEMENT	USER'S GUIDE B
NORTH	 PILLAR SPAR	 2 BLACK CONES POINTS UPWARD	 WHITE	Cardinal Buoys indicate the location of the safest or deepest water by reference to the cardinal points of the compass. There are four cardinal buoys: North, East, South and West. (ex: a north cardinal buoy is located so that safe water exists to the north of it)	Keep to the named side of all cardinal buoys (i.e. keep to the north of north cardinal buoys, keep to the east of east cardinal buoys, etc.) and the buoy will be between you and the danger. Consult your chart for details of the danger.
EAST	 PILLAR SPAR	 2 BLACK CONES BASE TO BASE	 WHITE	***Important*** A. Not all buoys are fitted with lights and topmarks. B. It is essential that this buoyage system be used in conjunction with the nautical charts.	***Memory aids*** (a) The points of the topmark cones point toward the black parts of the buoy (b) The cones on the north cardinal point north and those on the south cardinal point south. (c) The number of short light flashes in each group on the east, south and west cardinals is the same as the hour at the corresponding point on a clock face (e.g. the 3 flashes for the east cardinal corresponds to 3 o'clock)
SOUTH	 PILLAR SPAR	 2 BLACK CONES POINTS DOWNWARD	 WHITE		***Clock Face***  EAST SOUTH WEST
WEST	 PILLAR SPAR	 2 BLACK CONES POINT TO POINT	 WHITE		

Navigation Aid Failures

Any failure of a navigation aid in Canadian waters should be reported as soon as possible to the nearest Coast Guard Radio Station, Vessel Traffic and Information Centre or Coast Guard regional or district office.



Nautical charts

The Charts and Publications Regulations require that vessels carry, maintain and use appropriate charts, tide tables (if applicable), List of Lights and other Nautical Publications. Vessels fishing within 5 nautical miles of any known hazard, anchorage or port that they do not normally use shall use the largest scale chart for that area.

Nautical charts may be obtained from:

1 — The Hydrographic Chart Distribution Office, Department of Fisheries and Oceans.

2 — Institute of Ocean Sciences, Sidney, B.C.

3 — Authorized agents for distribution of marine charts,

(See addresses page 37.)

VHF Radio Marine Bands

Owners of fishing vessels equipped with a VHF radio must ensure that their on-board radio has been licensed by the Department of Communications. The licence must be prominently displayed near the radio installation.

Every operator of a VHF radio installation must hold a Restricted Radiotelephone Operator's certificate issued by the Department of Communications. You can obtain the *Radiotelephone Operator Handbook* prepared for persons wanting to obtain a certificate from Supply and Services Canada. (See address on page 37.)

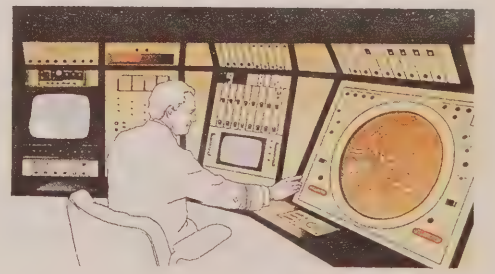
Vessel Traffic Service (VTS)

To promote safe and efficient shipping, the Coast Guard Vessel Traffic Service (VTS) has been established on selected waterways. The Traffic Centres conduct radio, and, in certain areas, radar surveillance of shipping.

Vessels should make radio contact with VTS centres on their VHF working frequency, rather than making the initial call on Channel 16.

Notices to Mariners (Canadian edition) published weekly contain important information and changes to nautical charts and publications. They can be obtained free of charge by writing to the address given on page 37.

Fishermen operating within a VTS zone should be familiar with calling-in requirements. Fishermen are encouraged to advise VTS when they operate in the vicinity of busy fairways or traffic separation schemes so that VTS may alert other shipping or fishing activity.



Communications and weather information

Weather information

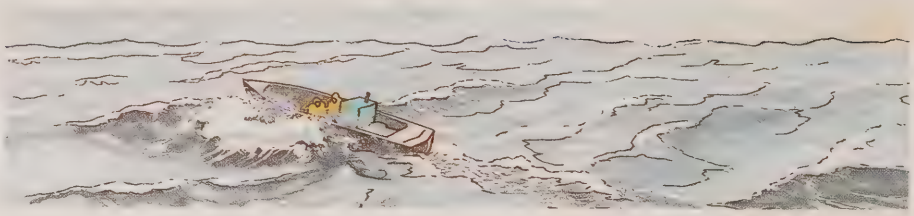
Available on:

- Channels 21B and 83B on the Atlantic Coast and Great Lakes
- Channels 21B and 39 (WXI) on the Pacific Coast
- Weatheradio Canada (Environment Canada) includes: VHF broadcasts in Vancouver, Toronto, Montreal, and Halifax.
- Regular AM and FM radio weather forecasts
- The Marine Weather Services Bulletin, obtained by calling the nearest Environment Canada Office.
- MAFOR Code is used on the Great Lakes and St. Lawrence River for weather broadcasts (see Radio Aids to Marine Navigation).

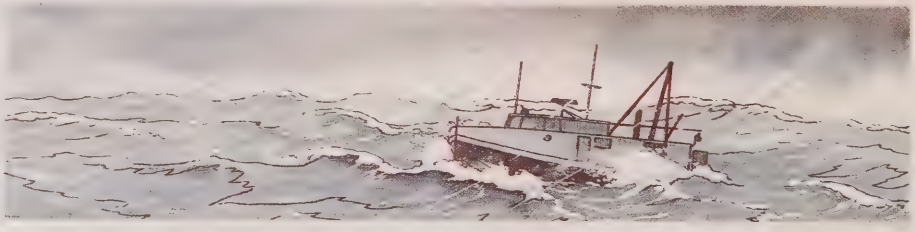
Note:

A receiver for continuous marine weather forecasts is available on the market and distributed through marine supply outlets.

Weather warnings



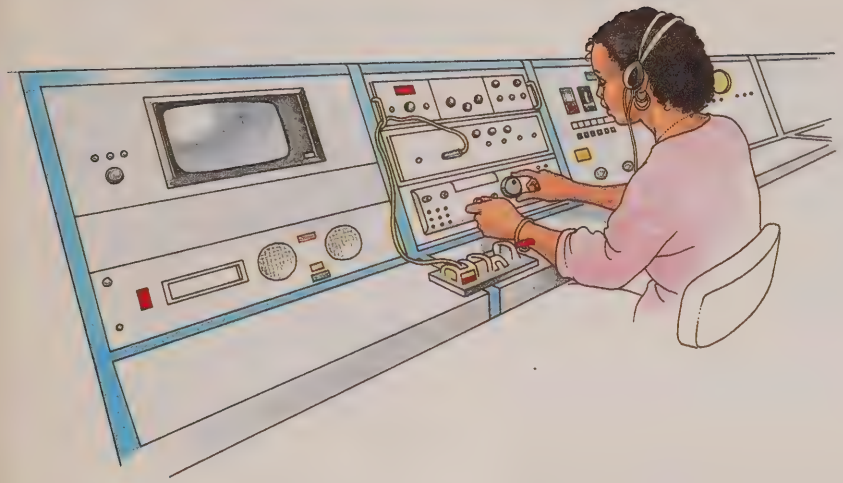
Small craft warnings are included in marine forecasts and nearshore forecasts if winds are expected to exceed 20 knots.



Gale warnings are included if winds are expected to exceed 34 knots but remain less than 47 knots.

Storm warnings are included if winds are expected to exceed 47 knots.

Marine radio



The Canadian Coast Guard provides 24-hour service on Channel 16 (156.8 MHz), and on 2182 kHz. These are used for distress and calling only!

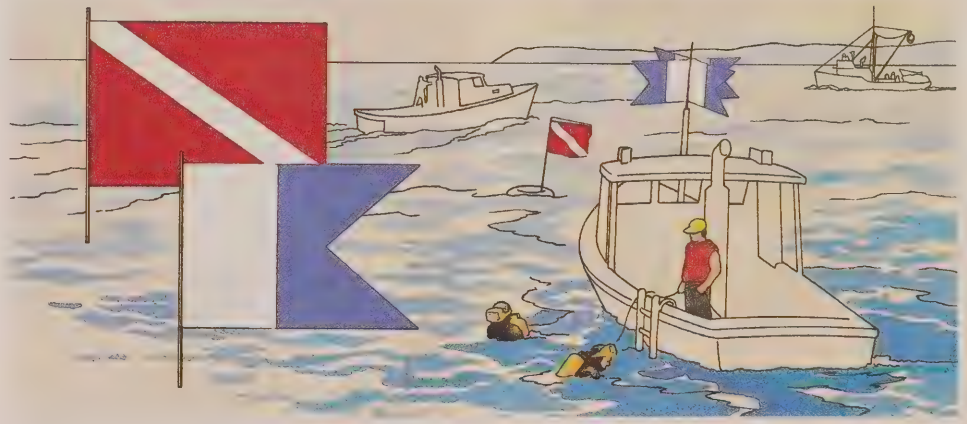
Complete information on the radio-telephone services which the Canadian Coast Guard provides is contained in *Radio Aids to Marine Navigation*, Supply and Services Canada. (See addresses in back of booklet.)

Diving

Mariners should exercise particular vigilance and care when navigating in waters where diving signals are exhibited.

The code flag 'A' indicating, 'I have a diver down: Keep well clear at slow speed,' is required by the Collision Regulations on vessels engaged in diving operations.

The red and white flag carried on a buoy is required by the 'Private Buoy Regulations' and is used to mark areas where skin diving is in progress. Again, stay well clear at slow speed.



Safety tips

1 When starting an outboard motor, make sure it is in neutral and in the straight-ahead position. A motor started in gear can cause a small boat, skiff or dory to turn suddenly and capsize.

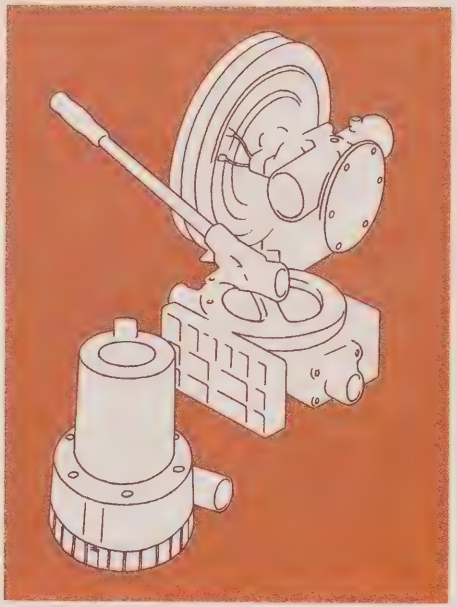
2 Check ladders. They should be well constructed, secured and maintained.

3 Wear protective footwear, safety headgear and suitable close-fitting clothing and gloves.

4 Keep decks clear of slippery materials. Use NON-SKID materials on decks.

5 Be sure the carburetor on your vessel's oil stove is designed for marine use. Ensure all fittings on the stove and tank are tight. Ensure all cooking and heating appliances have adequate heat shielding.

6 Make sure bilge pumps are working properly before sailing.



7 Use the *Buddy System* to travel in groups of two or more vessels.

8 Schedule maintenance to ensure safe and proper performance of running and standing rigging.

9 Maintain all machinery in safe operating condition.

10 Carry adequate spare parts on board.

11 Practise safe operations and seamanship at all times.

12 Protect yourself from the hazards of on-board processing of fish, i.e. injuries from teeth, knives and sharp, poisonous spines.

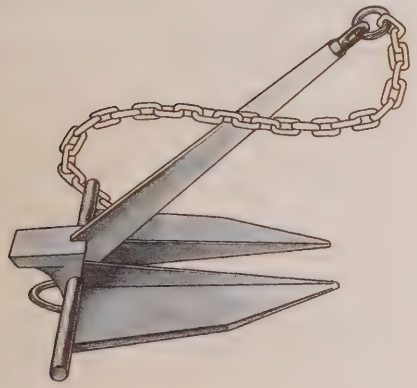
13 Make sure that the fish compartment covers are securely fastened.

14 Avoid removing or shifting of permanent ballast.

15 Discuss any alterations which may affect the stability of your boat with the local Coast Guard Ship Safety Branch.

16 Keep steering gear in good working condition and check it before each departure to sea. Do not employ automatic steering in restricted visibility, around other vessels or navigational hazards, or when entering or leaving port.

17 Inspect anchors, cables and chains periodically and secure shackles properly.



IT IS EVERYONE'S RESPONSIBILITY TO ENSURE SAFETY

First aid

Cardiopulmonary resuscitation (CPR)

Cardiopulmonary Resuscitation is the combination of artificial respiration and external heart massage. CPR is used after artificial respiration has been started and it is determined that the patient's heart has stopped. The most common cases in which it is needed on board ship involve electric shock, drowning, heart attack and severe hypothermia.

Proper instruction on CPR technique is required. All fishermen are encouraged to take CPR training from one of the many organizations that offer it, such as St. John Ambulance, Canadian Red Cross.

Artificial respiration

Artificial respiration is the technique of resuscitation applied to an unconscious person who has stopped breathing.

- Ensure there are no obstructions in the mouth or air passages; place the victim on his back and remove dentures. The airways must be open to allow air to reach the lungs.
- Lift the neck with one hand and tilt the head back with the other hand, so that the chin points almost vertically upward. This opens the air passages and ensures an adequate airway.
- Ensure that the casualty's head is fully extended, with chin well forward. Use one hand to pinch the nostrils and keep pressure on the forehead at the same time. This position keeps the tongue from falling back and obstructing the air passages.

Artificial respiration (continued)

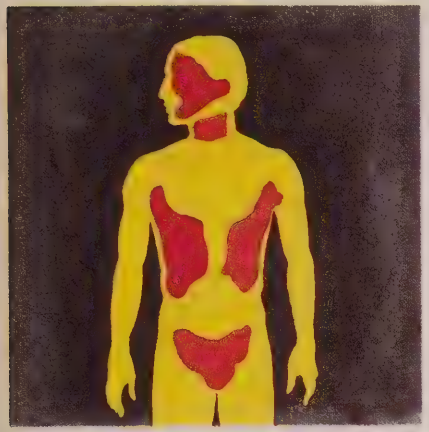
- Take a breath, open your mouth wide and place it over the casualty's mouth, making a tight seal. Quickly blow four times into the casualty's lungs to saturate the blood with oxygen, and look for the rise of the chest.
- Continue ventilations at a rate of 12-15 times per minute, or every 5 seconds.
- After each inflation of the casualty's lungs, raise your mouth from his face to allow air to escape. Listen for air to come out of the lungs and look for the rise and fall of the chest. If the casualty's chest fails to rise, there may be an obstruction or the head may be incorrectly positioned. Check for and remove any obstruction. Tilt the head well back and resume respiration.
- Continue until normal breathing is restored.

First aid

First aid is the emergency treatment of the sick and injured until trained medical assistance is available. All fishing boats should carry an adequate first aid kit. The Coast Guard and other professional organizations will provide, on request, a list of recommended medical supplies to be carried on fishing vessels. Because first aid, when properly applied, may mean the difference between life and death, fishermen are encouraged to take a first aid course.

Hypothermia

Hypothermia is the lowering of deep body temperature (loss of body heat) that places the body in a general state of shock, which in turn depresses normal body functions.



Main heat loss areas

- HELP (Heat Escape Lessening Position)

- When two or more people are in the water, form a huddle so that the sides of your bodies are held closely together.

- Get out of the water (partially or completely) on some form of flotation, e.g. an overturned boat.

Icing conditions

Ice formation may be caused by spray driven from wave crests, ship-generated spray, snowfall, rain, sea fog, arctic sea smoke, or a drastic fall in ambient temperature.

The heaviest ice formation occurs when the vessel is heading into the sea. In beam and quartering winds, ice accumulates on the windward side, which can cause an extremely dangerous list.

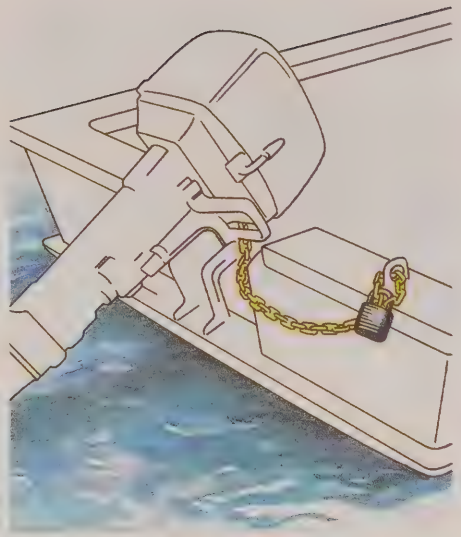
Ice on a vessel adversely affects seaworthiness, especially stability, trim and freeboard. Immediately reduce speed and commence removal of accumulated ice from the upper structures. Fishing operations should be stopped, gear recovered and secured as low as possible on deck. The vessel should return to harbour until conditions improve.

The Canadian Coast Guard (Ship Safety Branch) publishes a booklet, *"An Introduction to Fishing Vessel Stability,"* that deals specifically with the stability of fishing vessels. Consult it; it could save your life. You can obtain it by writing to the address given on page 37.

Marine security

Safeguarding your vessel by marking all items on it, recording serial numbers, and practicing some simple common sense precautions can reduce theft and vandalism.

- Secure outboard motors to skiffs with a case-hardened steel padlock and hardened steel chain
- Use a locking bar designed to conceal motor mounting screws that secure the motor to the transom
- If you keep your vessel at a mooring, secure it with a lock and chain in addition to your mooring line
- Avoid leaving loose gear on board when the vessel is unattended. Secure loose gear in locked compartments
- Photograph your vessel and gear to aid identification by police.



Sailing plans

Sailing plans are simple procedures whereby a mariner arranges for someone on shore to alert Search and Rescue authorities if the vessel has not returned to port or reported in by a specified time. Leave the completed sailing plan with a relative, friend, employer or local official. Listing all details of the vessel and the proposed trip will assist the planning of search operations should they become necessary.

Copies of the sailing plan are available from any Coast Guard District or Regional Office.

Compass

Deviation Tables must be kept up to date, particularly after alterations to electrical wiring or installation of electronic equipment.

Gyro compasses should be switched on well before departure and frequently checked against the magnetic compass.

Air Cushion Vehicles (ACVs)

- ACVs are highly manoeuvrable and create minimum wash moving at high speed. Do not be alarmed at high-speed operation.
- When operating, an ACV has no draught. Do not try to follow an ACV and do not be alarmed if you see one heading for shore or shallow water at high speed.
- ACVs are identified by an all-round flashing amber light.

Search and Rescue (SAR)

Search and Rescue operations in Canada are jointly co-ordinated by the Department of National Defence and the Canadian Coast Guard (Transport Canada). The Departments of Fisheries and Oceans, and the RCMP also assist in some circumstances. The volunteer Canadian Marine Rescue Auxiliary (CMRA) is actively involved in Search and Rescue operations.

The Department of National Defence, assisted by the Coast Guard, maintains 24 hour Rescue Co-ordination Centres at Halifax, Trenton and Victoria. The Coast Guard also operates Marine Rescue Sub-Centres at St. John's and Quebec.

Canadian Marine Rescue Auxiliary (CMRA)

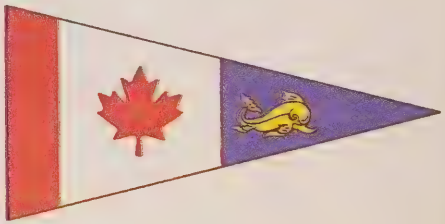
The Canadian Marine Rescue Auxiliary consists of five separate volunteer associations that provide people and vessels to supplement the Canadian Coast Guard's Search and Rescue resources.

The work of the CMRA is aimed primarily at preventing loss of life and injury at sea and also includes reasonable efforts to minimize or prevent property damage or loss.

CMRA volunteers conduct education programs to make boaters aware of regulations and recommended safety standards and the dangers inherent in marine activity.

Transport Canada provides CMRA associations with funds to cover insurance, fuel and oil, training and administrative costs.

Auxiliary members fly this pennant.



SAR flag

Federal Government vessels, other than Coast Guard, fly this SAR flag when temporarily assigned to SAR duties. The flag requires no action by any other vessel unless used in combination with other signals on a hoist.

Note: *The Canadian Coast Guard publishes "***The Merchant Ship Search and Rescue Manual***" with Canadian modifications (CANMERSAR – TP 7085E). The publication is available in Canada through authorized bookstore agents or from the Canadian Government Publishing Centre (see address on page 37). The cost in Canada is $5.95 (Price subject to change without notice).*

Prevention program (SAR)

Qualified Coast Guard personnel will, on request, conduct a Courtesy Examination of the mandatory and recommended safety equipment on small fishing vessels. Fishermen may also request a safety demonstration or display for their community or organization.

More information on Search and Rescue, the CMRA and SAR Prevention may be obtained from:

Canadian Coast Guard
Regional Manager,
Search and Rescue,
P.O. Box 1300,
St. John's, Nfld.
A1C 6H8
(709) 772-4074

Canadian Coast Guard,
Regional Manager,
Search and Rescue,
P.O. Box 1013,
Dartmouth, Nova Scotia
B2Y 4K2
(902) 426-7978

Canadian Coast Guard
Regional Manager,
Search and Rescue,
104 Dalhousie Street
Quebec, Quebec
G1K 4B8
(418) 648-4690

Canadian Coast Guard
Regional Manager,
Search and Rescue,
Toronto Star Building,
20th Floor, One Yonge St.,
Toronto, Ontario
M5E 1E5
(416) 831-2300 or 973-9849

Canadian Coast Guard
Regional Manager,
Search and Rescue,
1661 Whyte Ave.,
Vancouver, B.C.
V6J 1A9
(604) 666-0146

Note: *The Canadian Coast Guard has produced safe boating films for public viewing. These films are available at National Film Board offices or from the Canadian Coast Guard.*

Information sources

Where to call for Search and Rescue:

EAST:

Halifax
Phone: (902) 427-2102
or 1-800-565-1582

St. John's
Phone: (709) 772-5151
ZENITH 07021

Quebec
Phone: (418) 648-3599
or 1-800-463-4393

CENTRAL:

Trenton
Phone: (613) 392-2811
Local 3870 or 3875
or 1-800-267-7270

WEST:

Vancouver
Phone: (604) 666-8087

Victoria
Phone: (604) 380-2333
Other areas
1-800-742-1313

Edmonton
Phone: (403) 973-8402

Where to obtain Environment Canada Marine Weather Forecast Services:

Chief, Weather Services
Environment Canada
Pacific Weather Centre
Airport Square
1200 West 73rd Avenue
Suite 700
Vancouver, B.C.
V6P 2H9

Chief, Weather Services
Environment Canada
Twin Atria Building
4999 – 98th Avenue
2nd Floor
Edmonton, Alta.
T6B 2X3

Chief, Weather Services
Environment Canada
266 Graham Avenue
10th Floor, Room 1000
Winnipeg, Man.
R3C 3V4

Chief Weather Services
Environment Canada
25 St. Clair Avenue East, Suite 301
Toronto, Ontario
M4T 1M2

Chief, Weather Services
Environment Canada
100 Alexis Nihon Boulevard
Ville St-Laurent, Quebec
H4M 2N8

Chief, Weather Services
Environment Canada
1496 Bedford Highway
5th Floor
Bedford, Nova Scotia
B4A 1E5

Where to obtain application forms for licensing vessels:

Addresses and telephone numbers of Revenue Canada, Customs and Excise in your area may be found in your local telephone directory.

Where to obtain other marine publications and regulations (published by Government of Canada):

Publishing Centre
Supply and Services Canada
Ottawa, Ont.
K1A 0S9

Where to obtain nautical charts, sailing directions, tide and current tables, radio aids to marine navigation, *Radiotelephone operator handbook (land/sea/air)*, navigation canals:

Hydrographic Chart Distribution Office
Department of Fisheries and Oceans
1675 Russel Road, P.O. Box 8080
Ottawa, Ont.
K1G 3H6

Institute of Ocean Sciences
P.O. Box 6000
9860 West Saanich Road
Sidney, B.C.
V8L 4B2

Where to obtain *Notice to Mariners*

Canadian Coast Guard
Vessel Traffic Services
344 Slater St. W.
Canada Building
Ottawa, Ontario
K1A 0N7

Where to obtain *An introduction to Fishing Vessel Stability*

Canadian Coast Guard
Ship Safety
344 Slater St. W.
Canada Building
Ottawa, Ontario
K1A 0N7

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